

Anti-JCHAIN Antibody Picoband®

Catalog Number: A02644-2

About JCHAIN

Immunoglobulin J chain, also known as IGJ and IGCJ, is a secreted polypeptide which is the first immunoglobulin-related polypeptide expressed during the embryogenesis and differentiation of B cells in the fetal liver. The joining Immunoglobulin J chain is a small polypeptide, expressed by mucosal and glandular plasma cells, which regulates polymer formation of immunoglobulin (Ig)A and IgM. Immunoglobulin J chain / IGJ serves to link two monomer units of either IgM or IgA. In the case of IgM, the J chain-joined dimer is a nucleating unit for the IgM pentamer, and in the case of IgA, it induces larger polymers. Immunoglobulin J chain / IGJ also helps to bind these immunoglobulins to the secretory component. J-chain incorporation into polymeric IgA (pIgA, mainly dimers) and pentameric IgM endows these antibodies with several salient features. Immunoglobulin J chain / IGJ is involved in creating the binding site for pIgR / SC in the Ig polymers, not only by determining the polymeric quaternary structure but also by interacting directly with the receptor protein. Both the immunoglobulin J chain / IGJ and the pIgR/SC are key proteins in secretory immunity.

Overview

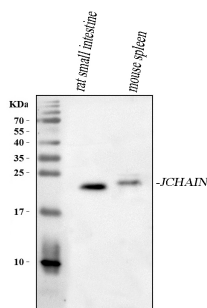
Product Name	Anti-JCHAIN Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-JCHAIN Antibody Picoband® catalog # A02644-2. Tested in ELISA, IF, IHC, ICC, WB, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
Storage Instructions	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.
Host	Rabbit
Uniprot ID	P01591

Technical Details

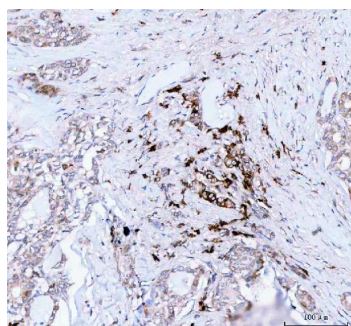
Immunogen	E.coli-derived human JCHAIN recombinant protein (Position: Q23-D159). Human JCHAIN shares 77.4% and 73.5% amino acid (aa) sequence identity with mouse and rat JCHAIN, respectively.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
Cross Reactivity	No cross reactivity with other proteins.

Isotype	IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5 ug/ml, Mouse, Rat Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human, Rat Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human Flow Cytometry (Fixed), 1-3 ug/1x10 ⁶ cells, Human ELISA, 0.1-0.5 ug/ml, -

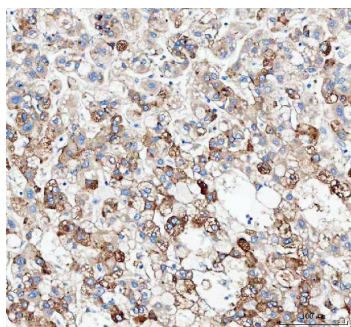
Anti-JCHAIN Antibody Picoband® (A02644-2) Images



Western blot analysis of JCHAIN using anti-JCHAIN antibody (A02644-2). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: rat small intestine tissue lysates, Lane 2: mouse spleen tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-JCHAIN antigen affinity purified polyclonal antibody (Catalog # A02644-2) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for JCHAIN at approximately 23 kDa. The expected band size for JCHAIN is at 18 kDa.

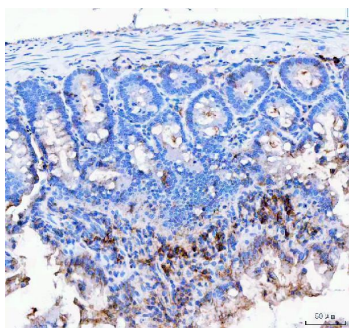


IHC analysis of JCHAIN using anti-JCHAIN antibody (A02644-2). JCHAIN was detected in a paraffin-embedded section of human thyroid cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-JCHAIN Antibody (A02644-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

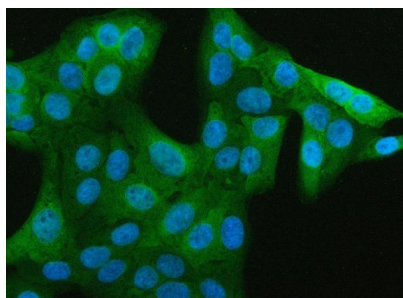


IHC analysis of JCHAIN using anti-JCHAIN antibody (A02644-2). JCHAIN was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-JCHAIN Antibody (A02644-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

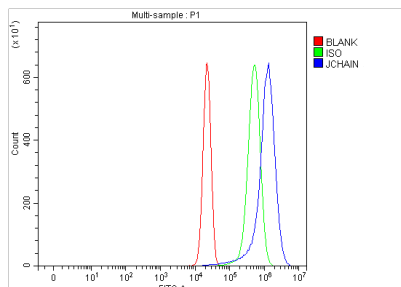
IHC analysis of JCHAIN using anti-JCHAIN antibody (A02644-2). JCHAIN was detected in a paraffin-embedded section of rat colon tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml



rabbit anti-JCHAIN Antibody (A02644-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IF analysis of JCHAIN using anti-JCHAIN antibody (A02644-2). JCHAIN was detected in an immunocytochemical section of U2OS cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-JCHAIN Antibody (A02644-2) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of A431 cells using anti-JCHAIN antibody (A02644-2). Overlay histogram showing A431 cells stained with A02644-2 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-JCHAIN Antibody (A02644-2, 1 ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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Anti-JCHAIN Antibody

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